



No 16

Inaugural Dissertation  
ON

CHOLERA INFANTUM.

Submitted to the Examination of the  
The Rev. Frederick W. Peasley D. D. President  
The Trustees & Medical Faculty of the  
University of Pennsylvania.

For the Degree of Doctor of Medicine

On the 27<sup>th</sup> day of October 1822.

By James M. Greene of Pennsylvania

Member of the Philad<sup>a</sup> Medical Society.

Passed March 27<sup>th</sup> 1823

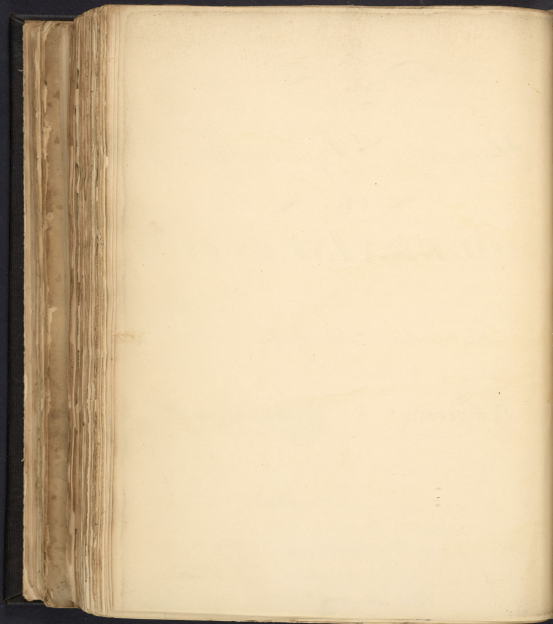
HOBBES

# Chapter I. Introduction.

The first object of this work is to present a clear and concise statement of the principles of the science of the mind, and to show how these principles are applied in the various branches of human knowledge.

In the second place, it is intended to show how the principles of the science of the mind are applied in the various branches of human knowledge, and to show how these principles are applied in the various branches of human knowledge.

It is also intended to show how the principles of the science of the mind are applied in the various branches of human knowledge, and to show how these principles are applied in the various branches of human knowledge.





## Cholera Infantum.

Cholera Infantum is a disease that demands the serious attention of every Practitioner of Medicine in the United States, not only from its prevalence in the hot seasons, but from the mortality by which its progress may sometimes be traced.

From the cursory view which I have taken of some of the European writers who have written on the diseases of Children, I have been unable to find any one that corresponds in every feature to that under consideration.

True it is that in Europe (at least the part with which I was acquainted) Children are frequently distressed by bowel complaining, sometimes very tedious in their course, nay even fatal in their termination. From the circumstances that in the countries of Europe as well as here, very old matron & indeed very young ones who has been

2. *Helix* *intertexta*

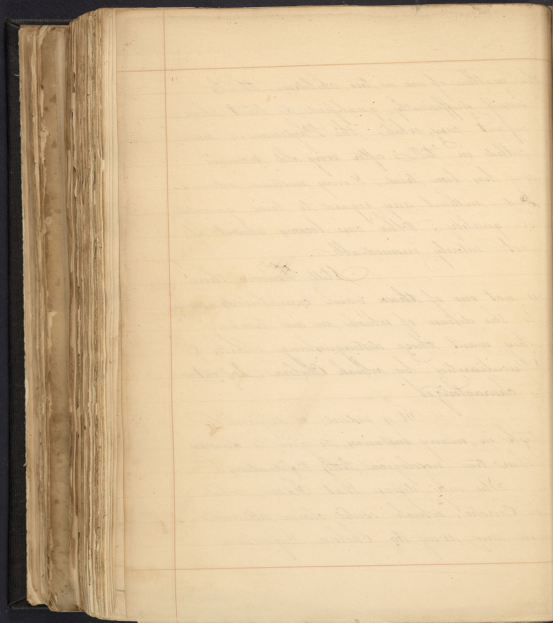
*Helix intertexta* is a small, slender, and very delicate shell, which is found in the same localities as the other species of the genus. It is distinguished from the other species by its size and shape. The shell is very thin and fragile, and it is very difficult to find in the field. It is a very common species in the collection, and it is very interesting to study. The shell is very smooth and glossy, and it has a very beautiful pattern of lines and spots. The color is a pale yellowish-brown, and the spots are a darker brown. The shell is very small, and it is very easy to lose. It is a very beautiful and interesting species, and it is very worth collecting.

the mother of one or two children, thinks  
herself sufficiently qualified to treat these  
infant cases, while the Physician is never  
called in till after every old woman's  
cure has been tried, & every nostrum admini-  
stered, without any regard to time, quantity  
or quality; & the case becoming almost if  
not entirely irremediable.

Still however there  
is not one of those bowel complaints similar  
to the disease of which we are treating.  
They want those distinguishing marks &  
peculiarities by which Cholera Infantum  
is characterized.

It is indeed a difficult  
task in many instances, to give to disease  
their true nosological title & situation.

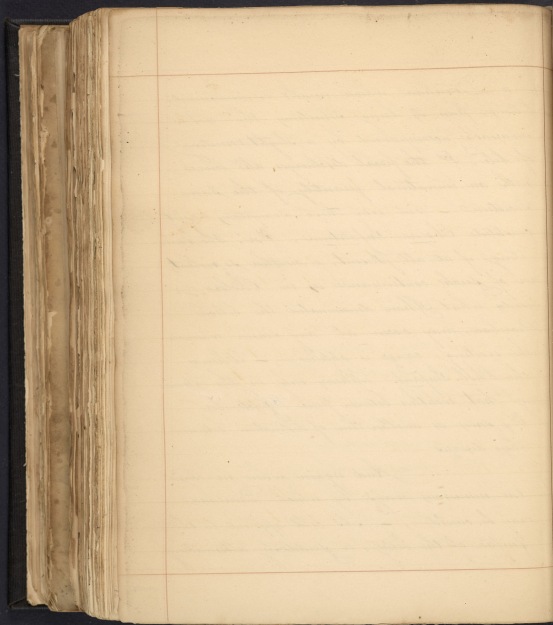
The only disease that I saw while  
in Europe, which could claim alliance  
in any way to Cholera Infantum



is a Diarrhoea which might be denominated  
bilious; from its being something, tho' not  
invariably accompanied by a slight vomiting  
of bile, & the fecal discharges, also mixed  
with an unnatural quantity of the same  
secretion - but even these symptoms do not  
constitute Cholera Infantum. For, the vom-  
iting if at all present, is neither so violent,  
nor of such continuance as in Cholera;  
besides, what I have denominated the bilious  
Diarrhoea, may occur at any season whenever  
the exciting cause is applied - Whereas  
the Chol. Infant. appears only in the extreme  
hot weather between June & September.  
This serves as another line of distinction between  
these diseases.

And again when we consider  
the numerous ways by which Diarrhoea  
may be caused, - As cold applied to the  
surface of the body, or suddenly alternating

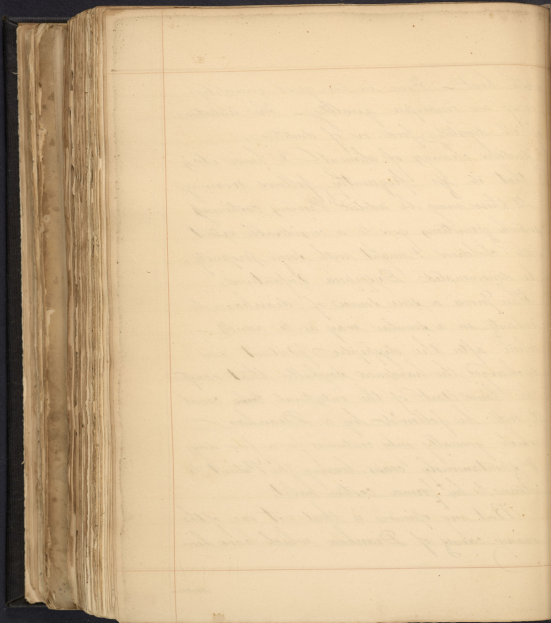
with



with heat - Food in too great quantities,  
or of an improper quality - The introduction  
of ill digested food, or of dentitions,  
sudden change of aliment & hence it is  
that it so frequently follows meaning  
to these may be added Previous costiveness  
which sometimes goes to a considerable extent,  
with children I might with some propriety,  
be denominated *Dyspepsia Infantum*,

This proves a pure source of diarrhoea to  
infants, in a similar way as to adults -  
where after the dyspeptic Patient has  
discharged the hardened stoolball that occupies  
the lower part of the intestinal tube, canal  
it will be followed by a Diarrhoea  
which generally only continues for a few days  
& spontaneously ceases, leaving the Patient to  
return to his former costive habit.

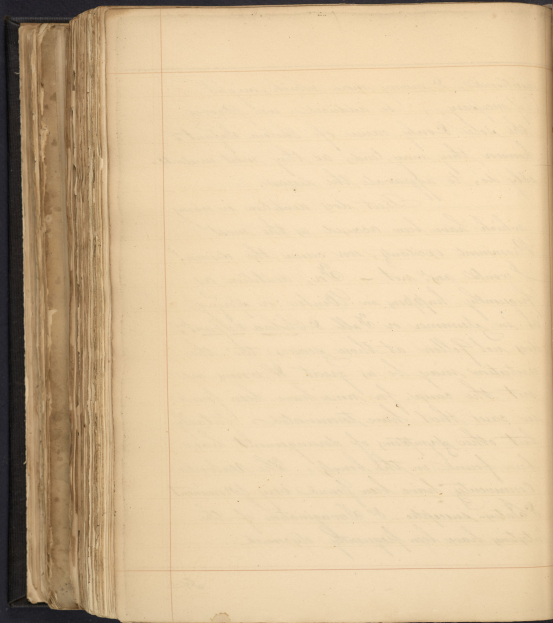
But my opinion is that not one of the  
many causes of Diarrhoea which have been





mentioned, & many more which might  
(if necessary) be adduced, and proves  
the sole & only cause of Cholera Infant<sup>um</sup>  
however they may tend, as they most undoubt-  
edly do, to aggravate the disease.

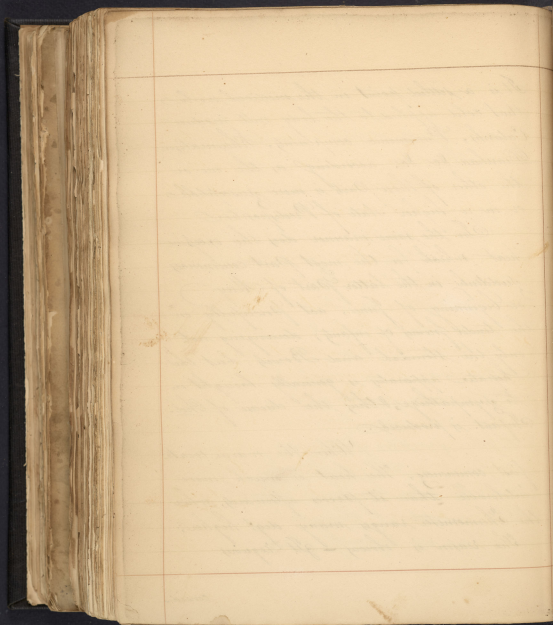
But does dentition or worms  
which have been accused as the most  
Prominent excitants, ever cause the disease?  
I would ans<sup>r</sup>. not. - For, dentition as  
frequently happens in Winter or Spring  
as in Summer or Fall & Cholera Infant<sup>um</sup>  
does not follow at those seasons: tho' the  
irritation may be as great & worms are  
not the cause, for none have been found  
in cases that have terminated fatally  
but other symptoms of derangement have  
been found in the bowels. The valvulae  
Conniventes have been found very prominent  
& Int<sup>er</sup>-susceptive, & Irrazination of the  
intestines have been frequently discovered



It is a settled point in the medical world  
that cold applied to the body, will produce  
Catarrhs, Pneumonic complaints, Rheumatism,  
Diarrhea &c. &c. according as the one or  
the other of those parts is more susceptible  
or in a higher state of Predisposition.

In the same manner does the excessive  
heat which for the most part commences  
suddenly in the latter part of May  
or beginning of June, act powerfully on  
the tender frame of infancy; deranging not  
only the stomach and Bowels, but the  
hepatic apparatus is generally brought on  
to sympathize; & thus the disease of Chol.  
Infant. is produced.

When the warm weather  
first commences, the heat is much more  
intolerable than it proves afterwards, when  
the Thermometer ranges many degs higher.  
The reason is obvious - It requires



considerable time for the body, to accommodate itself to any sudden change.

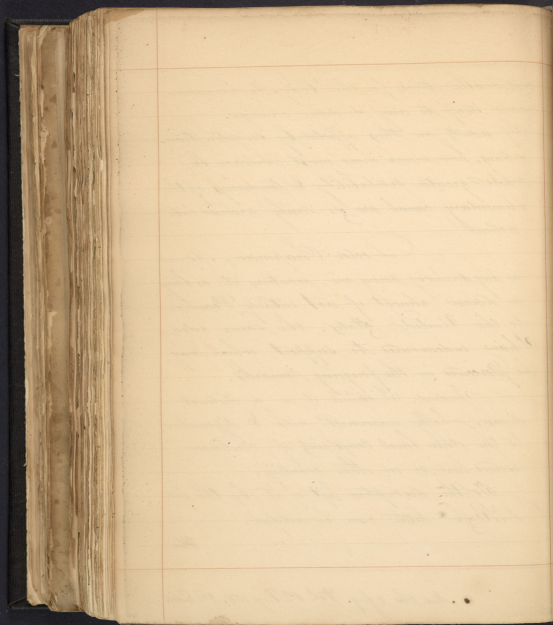
If adults are thus affected by sudden transitions, how much more must Children be, whose greater excitability & tenderness of the alimentary canal are so easily aroused into action.

Doctor Chapman, as well as my memory serves me, mentions it, as being a disease almost if not entirely Peculiar to the United States, the same idea I have endeavoured to support, which may be perceived in the foregoing remarks,

Indeed I think it is a distinct disease, wholly unconnected with & dissimilar to the other bowel complaints of Children observed here, or in other countries.

To the description left of it by the late D. Rush \* little can be added.

She

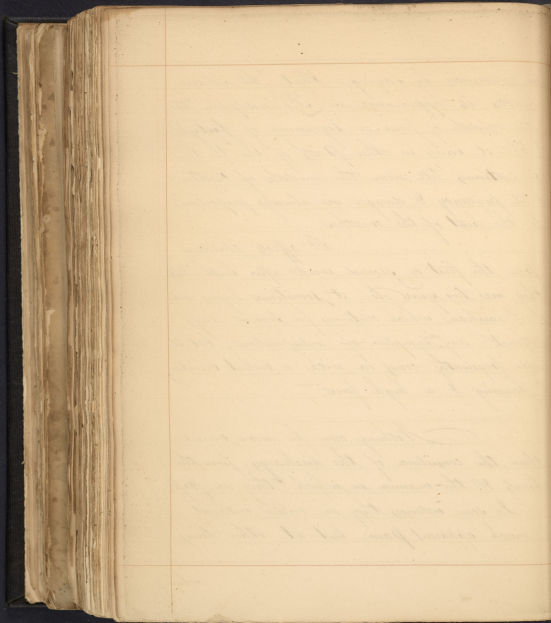


he commences by saying, that "It seldom makes its appearance in Philadelphia, till the middle of June or beginning of July, (tho it varies in other parts of the U. S.) & continues till near the middle of September, & its frequency & danger are always proportioned to the heat of the weather,

It affects children from the first or second week after birth, till they are two years old, it sometimes begins with a Diarrhoea which continues for several days without any <sup>other</sup> symptom of indisposition, but it more frequently comes on with a violent vomiting & purging & a high fever."

Nothing can be more varied than the consistence of the discharges, from the bowels & the manner in which they are passed. In some instances they are voided without much apparent pain, but at other times

when



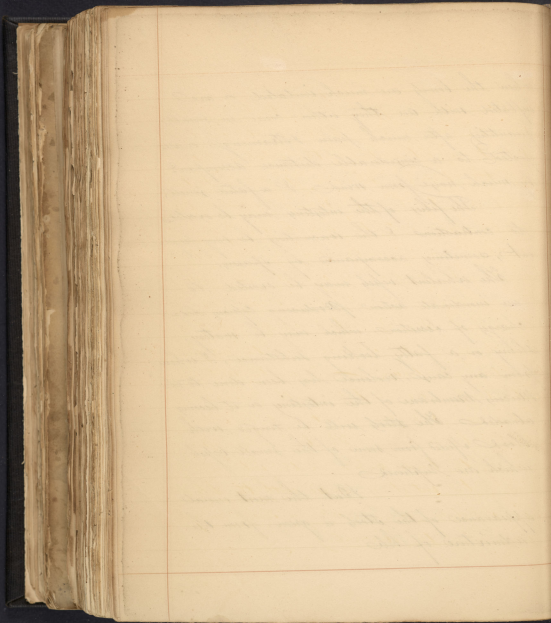


when the bowels are much irritated or are inflated with air, they either come in small quantities after much pain & straining, or are ejected to a considerable distance accompanied by much noise from wind, & a fætid smell.

The fibres of the intestines may be excited to contractions & the evacuations be very frequent, sometimes accompanied by spasms.

The exhalant vessels may be excited to an inordinate action, producing copious discharge of secretion, which may be watery, slimy or a fatty looking substance, & when from any cause, violence has been done to the Mucous Membrane of the intestines or it becomes abraded. The stools will be tinged with blood effused from some of the small vessels which are ruptured.

But the most usual appearance of the stools is green, from the admixture of bile.



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The manner in which such copious discharges of bile are secreted, appears to me to be as follows.

The liver may be excited to inordinate secretion without any interposition of the intestines, & the bile then becomes a source of irritation to the bowels, or if the bowels be previously affected, the irritation may excite the liver to very copious secretion. — Another way by which the bile may be produced so copiously is — Vomiting. This may so far act on the Gall-bladder, as to cause it to pour its contents into the intestines & sometimes into the stomach, thro' the interposition of the Duodenum — When the irritation of the bowels is very great the matter discharged is very green, & in the highest state of excitement it will be brown. The blood effused from some of the tender vessels on the internal coats of the intestines, mixed with the bile & other secretions, easily acc'ts for such an appearance of the evacuation.



10  
It sometimes happens in cases of this kind that  
portions of coagulated milk will be found floating  
in the discharges from the bowels, or if the child  
receives milk & water to quench its thirst which  
is always intense, The stools will be almost green,  
watery, & mix'd with bile, sometimes bloody and  
mixed with mucus, but more frequently pale &  
fluid of an intolerable & peculiar odour  
& easily penetrating the thickest folds of linen,

From the commencement the  
disease is attended by a high fever which the  
indistinctly mark'd, is generally allowed to be of  
the remittent kind. The pulse is small, quick  
corded & very frequent. In extreme cases the  
pulsations succeed each other so rapidly, as nearly  
to preclude the practicability of numbering them.

There is also considerable inequality of tem-  
perature, it is not unusual to find one part  
excessively warm, while some others & particu-  
larly the extremities, as being furthest from

the



centre of circulation, are preternaturally cold.  
Dr. Rush says, in some instances Children throw  
their heads backwards & forwards & sometimes make  
attempts to scratch & bite their parents, Nurses, &  
even themselves

If the disease be permitted  
to continue without any remedies, or if Medicines  
have been applied they prove unavailing, an alarm-  
ing train of symptoms follows: in some cases  
the mouth becomes apthous to a great extent,  
great emaciation takes place, the skin hangs  
loose & more particularly so on the extremities

The eyes appear dead & sunk or of a glassy  
appearance, & almost if not entirely insensible  
to surrounding objects. The little sufferer sleeps  
the eyes half close, in this situation it may  
continue for a little, but death shortly closes  
the scene. For, after the above mentioned  
symptoms have been fully confirmed, I believe  
there are but few cases of recovery on record

Treat-





Treatment. Successfully to treat a disease of which the foregoing are the symptoms, a disease, which in each revolving year, so augments the bills of Mortality; must be a desideratum with every Physician possessing the Com<sup>n</sup> feelings of humanity, or in whose breast the milk of human kindness has not ceased to flow.

The first symptom of the disease according to the foregoing description which calls for relief is the excessive Vomiting.

The exhibition of an emetic to meet this indication is thought by many (& I believe justly so) to be hazardous, particularly if the Stomach be excited to convulsive & violent actions. And if there be reason to suppose that the offending matter has been evacuated, or if the attack has been so sudden & violent, as to produce considerable prostration of strength, with a weak pulse & cold extremities. The

act.



administration of an emetic, would be unsafe  
& injudicious practice. Here to subdue the  
flat, Vomiting & Nausea, which remain, warm  
& stimulating Application should be externally  
applied. The hot water bath is one of the most  
powerful remedies for this symptom, especially  
when rendered more stimulating by the addition  
of Salt & Mustard or Cayenne Pepper. After  
the warm bath I would order a mustard or mu-  
stard poultice to the Epigastrium, repeated every  
3rd hour, till it proved successful.

Even a solution of Camphor in Sp. Serrpent.  
or of Cantharid. mix'd with Serrpent.  
might prove singularly successful.

At the same time I would order one or  
two tea Spoonfuls of Soda<sup>and</sup> & one drop of  
Laudanum; or what would be  
still more effectual, one or two tea Spoon-  
fuls of lime water in a little Mucilage  
of Gum-Arabic.



When the offending matter has not been completely evacuated by spontaneous vomiting, I would not hesitate to give a mild dose of Ipecacuanha under the restrictions which should be attended to in the administration of such Medicines —

Our next attention is directed to the body the matter which they contain may serve as a constant source of irritation. To remove it we may employ Calomel, Castor oil or Magnesia,

In mild cases, one or two tea spoonsfull of the Alaginous mixture given occasionally will answer, but every indication which a purgative is designed to meet, will be best fulfilled by Calomel, — Independent however of its purgative powers, it exerts a direct & powerful influence over the hepatic System. This valuable property of the Medicine shows, I believe generally, does cause it to rank highest in the estimation of the best practitioners — The most eligible form of ad-



administering it, is in combination with Opium  
& Spicac.  $\mathcal{L}$ . a dr. from Co. S.M. to 1 Ounce  
I should give a pill composed of from  $\frac{1}{4}$  to  $\frac{1}{2}$  gr.  
grain Calom.  $\frac{1}{4}$  Spicac.  $\mathcal{R}$   $\frac{1}{4}$  or  $\frac{1}{2}$  Opium every  
two or three hours, — as the Calomel may  
be given in minute doses  $\frac{1}{4}$  grain rubbed up with a  
little sugar, is generally administered every 2<sup>d</sup> hours,  
'till the stools become natural.

After we have proceeded thus far  
in allaying the irritability of the stomach and  
given one or two purges to clear the bowels,  
I would next try the extract of the  
Dispensatories, a tea spoonful or two at a  
time with one or two drops of laudanum,  
according to the age & strength of the patient.  
will sometimes succeed in stopping the remaining  
Diarrhoea — But neither from this nor from  
any other medicines are we to look for convers.  
Success. — At the same time we are giving  
the previously mentioned medicines, we may

give





give injections of starch, flaxseed tea, Gum water  
or any other demulcent, or we may give some of  
the astringent injections, decoction of Galls - Oak-  
bark &c &c - One thing worth attending to  
in giving injections is - to administer them in small  
quantities, - they will thus have the desired effect  
whereas if they be given in large quantities  
as the generality of Nurses are in the habit of  
(unless previously told) they will be ejected  
almost as soon as given.

It is natural to suppose the little patient  
would require some nutriment. - For, after  
the disease has been of some continuance, the  
child will be reduced to a state of great  
debility, & much emaciated, before they stage  
or even as soon as the bowels have been eva-  
cuated & the irritability of the stomach calmed?  
we should begin to give some nourishment.  
I do not know that any thing will an-  
swer better than Gum - Arabic water, rendered

pleas-



16  
Pleasant by the addition of some aromatic  
as a little cinnamon, cloves, or nutmeg, This  
preparation as far as I have seen it, has a  
greater effect than we could anticipate from  
it reasoning (a priori)

I have heard indeed  
that some practitioners treat the disease altogether  
by a diet of Gum-Arabic, confining the  
patient wholly to it, so much so, as frequent-  
ly to render the discharge pure Mucilage.  
If the child be not yet weaned & still  
able to suck, we need not be very anx-  
ious to give it much aliment. The Mother's  
milk is the most nutritious & at the same  
time the most natural support. - But  
in case the little patient's mouth become  
apthous, the Gum Mucilage will become  
an article of indispensable utility -  
Indeed I have seen the Gum used so well that  
I should give it the Preference. - It generally

hap-

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happens in the stage of which we are treating that the extremities are cold & the body covered with a clammy Perspiration, here the warm bath should be directed; - The Principles on which it is serviceable are so plain as not to require any Verbose explanation.

Sinapisms may also advantageously be applied to the extremities.

This Summer (1822) I had an opportunity of testing a part of the plan of treatment which I have been endeavouring to lay down - Calling about the middle of July to see a former Acquaintance - a respectable Lady - whose present distressed Situation, is rendered even more poignant by the remembrance of better days - And observing her youngest child about two Months old, sick & ghastly, I enquired the cause. - From the manner in which she described the precarious state of the

child -

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16  
suffer, I knew it was in the last stage of  
Cholera Infantis - No Physician being  
in attendance, I directed the Mother to  
use the Warm Bath, & to give the little  
Patient, two or three spoonful occasionally  
of a mixture of hard Water biscuit, grated  
down on boiled New-Milk, - She was  
also directed to administer a few injections  
of Starch - -

Having procured her  
some port wine, she gave it in small quan-  
tities together with a tea spoonful or two of  
the decoction of Logwood. & homely as  
were the remedies employ'd I had the  
gratification to find that in 3 days the  
child was convalescent.

The warm bath having equalized the  
temperature & the internal applications together  
with the injections stopped the frequency of the  
stools which on my first seeing the child were

green





green, & watery & voided in a state of  
effluence. - I next ordered the cold  
bath & flannel roller round the child's abdomen:  
By these simple means, together with the little  
Patient being carried out three or four times - I  
had the extreme pleasure of seeing it completely  
restored in the space of eight days from the time  
of my first seeing it.

I would not however attempt  
to say, that the plan which I pursued in this  
& one or two other cases would prove universally  
successfully, - For, as diseases are constantly  
varying, from change of season, peculiarity  
of Constitution & other circumstances, the Rem-  
edies applied must in like manner vary to  
meet the diff<sup>t</sup> Symptoms as they present  
themselves.

If the disease be obstinate in  
yielding to the Remedies which have been re-  
commended, I would not abandon the

Patient,



Patience as there are numerous others which  
may be resorted to.

We have before us the whole  
catalogue of Astringents in the Materia Medica  
both from the Mineral & Vegetable Kingdom.  
From the Vegetable however there are not more  
than three or four which I would use, viz  
the Gall, Logwood, Kino, & a species of  
the Blackberry, the latter for every laxative  
state of the bowels was a favorite remedy  
among the quacks & Nurses of my native country  
but was strenuously decried & opposed by the re-  
gularly bred Physicians, from the very indis-  
criminate manner in which it was employed.

And I am disposed to believe that  
astringents are too generally employed, to the  
exclusion of those remedies which are calcula-  
ted to correct the vitiated secretions of the  
abdominal Viscera. — I have seen patients  
in the latter stage speedily recovered.



21  
by the use of very small doses of Calomel alone  
frequently repeated, which no doubt acted  
as an alterative upon the hepatic & other  
secretions. —

About this stage the decoction  
of Hamamelis Campicis. in a little port  
wine, or a little spiced Rhubarb  
might be advantageously given, or some weak  
brandy, toddy, sometimes proves serviceable.

As nutriment we may direct a  
little jelly for the little patient. or it may  
have a preparation of Sage, Arrow root,  
or Tapioca made palatable by the addition  
of some spices. — The Arrow root I prefer.

What I have known to answer uncommon-  
ly well in many cases, is the liquor of  
Clams, or Oysters, we might infer from the  
good effects of it in adults, that it would  
be serviceable here, & on trial it has been  
found to justify the conclusion, by imparting

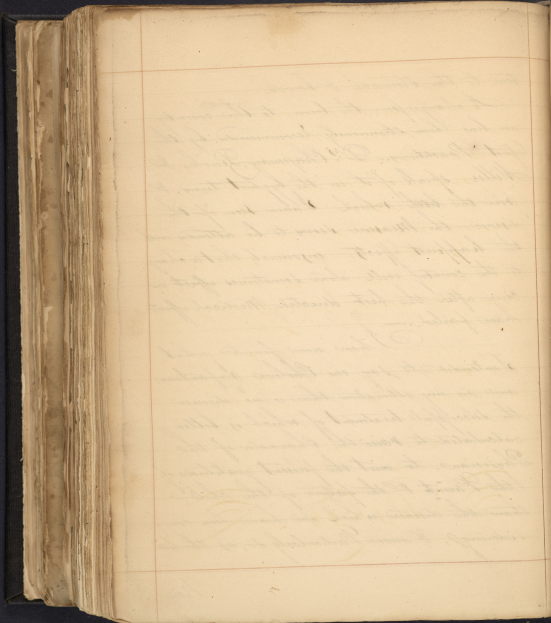


tone to the stomach & bowels.

A change from the town, to the country air has been strenuously recommended by the first Practitioners. — Dr.<sup>s</sup> Chapman, Rush, & Miller, speak of it in the highest terms, & from the little which I have seen of the disease, the Measure seems to be attended with the happiest effects, inasmuch that a change to the country will alone sometimes effect a cure after the best directed Medical efforts have failed. —

I have now finished what I intended to say on Cholera Infantum; and in my estimation there is no disease, the successful treatment of which is better calculated to raise the Character of the Physician, to merit the present gratitude of the Parents & the future of the child, than the disease which we have seen considering, & more Particularly so, as the little

Patent





Patients are generally brought to the lowest state  
The Physician perhaps in the winter of life  
when "his head shall be silvered o'er with age"  
amidst the labours of his Profession, shall hear  
this pleasing salutation from his former  
juvenile Patient, now developed into  
Manhood & in the busy scenes of the world.  
"This is the Doctor to whom I am  
Particularly indebted for my life, whose  
assiduity & attention snatched me from a  
Premature grave" Such an exclamation  
from an individual of Merit, would  
more than compensate the thousand acts  
of Ingratitude, which Physicians  
are "fated" but too liable to meet  
with in their Progress thro' life.

FINIS.

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